The Budgetary Treatment of Federal Civilian Agency Pay Raises: A Technical Analysis

Special Study

January 1983

CONGRESS OF THE UNITED STATES CONGRESSIONAL BUDGET OFFICE

THE BUDGETARY TREATMENT OF FEDERAL CIVILIAN AGENCY PAY RAISES: A TECHNICAL ANALYSIS

The Congress of the United States
Congressional Budget Office

NOTES

Unless otherwise noted, all years referred to in this report are fiscal years.

Details in the text, tables, and figures of this report may not add to totals because of rounding.

In tables, BA refers to budget authority, O signifies outlays.

PREFACE

The Congressional Budget Act (Public Law 93-344) requires the Congressional Budget Office (CBO) to submit an annual report on budgetary projections and to assist the House and Senate Committees on the Budget in preparing the Congressional budget resolutions. As part of these responsibilities, CBO periodically issues technical analysis papers that provide background information and documentation on CBO's budget estimates. This paper, the latest in the series, reviews the budgetary treatment of federal civilian agency pay raises and describes how CBO estimates the costs of those pay raises.

The report was written by Charles Essick of the Projections Unit, Budget Analysis Division, under the supervision of Paul N. Van de Water and James L. Blum. The author gratefully acknowledges the assistance of Frank White of the Office of Management and Budget and Fred Hohlweg of the Office of Personnel Management. Valuable comments were provided by David Delquadro, Robert Hartman, and the Projections Unit staff. Francis Pierce edited the report, and David A. Bashore prepared it for publication.

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January 1983

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SUMMARY

This report deals with the treatment of civilian agency pay raises in the federal budget. It addresses two primary topics: the major determinants of federal civilian pay costs, and the model used by CBO to project the cost of civilian agency pay raises.

These topics are important for two reasons. First, federal civilian agency pay raises usually involve a great deal of money. In 1982, for example, the Congress appropriated nearly $1 billion to cover the cost of the 4.8 percent pay adjustment approved for civilian agency workers in that year. Because the actual level of expenditures depends largely on policy decisions made by the President and the Congress, the ramifications of federal pay policy should be made as clear as possible. Second, computing federal pay costs is very complex, largely because of the numerous pay systems maintained by the federal government. Separate salary schedules exist for regular white-collar employees (General Schedule), Foreign Service workers, doctors and nurses, blue-collar employees, uniformed personnel, and top-level federal executives. Because of this complexity, CBO has developed a computerized model for projecting the additional budget authority and outlays required to finance anticipated pay raises for federal workers. This model projects pay raise costs for a five-year period.

MAJOR FACTORS AFFECTING FEDERAL PAY

In drawing up budget estimates to cover federal civilian pay raises in future years, the analyst must consider (1) the effect of policy decisions on the rate of increase in federal pay, and (2) the extent to which pay increases are to be covered by additional funding. Personnel policies such as promotion rates and employment levels do not, as a rule, affect the budget estimates.

Determining the Annual Pay Rate Adjustment

The specific pay rate increase assumed in future years is dependent on the nature of the budget projection or cost estimate required. Sometimes CBO is asked to calculate the cost associated with a comparability pay rate adjustment. The principle of comparability requires federal workers to receive salaries and wages that are comparable to those received by workers serving similar functions in the private sector. As a result, comparability reflects not only the annual change in wages and salaries for certain

private-sector jobs but also other differences in federal and non-federal jobs, such as the gap between federal and private-sector pay caused by past caps on federal salaries. For fiscal year 1983, for example, the Office of Personnel Management (OPM) estimated that a pay adjustment of 18.5 percent would be required to achieve comparability. The catch-up component of this increase (in other words, the adjustment necessary to make up for past pay caps) was over 8 percent.

On other occasions, CBO is asked to prepare pay raise cost estimates under the assumption that federal workers will receive a salary adjustment based on the actual annual change in private-sector pay. This differs from comparability, of course, in that the catch-up adjustment is not included. Moreover, given that private-sector wages and salaries are determined by a wide range of factors affecting labor market conditions, this measure is more than an indicator of annual price changes.

While a number of factors can affect the size of the annual federal pay adjustment, the Congress and the President ultimately decide what the increase will be. Consequently, most CBO pay raise cost estimates involve projecting the level of expenditures resulting from a pay plan proposed by the Administration or the Congress. These estimates allow the budget committees to compare various pay raise proposals as they formulate a budget resolution. In 1983, for example, the Congress and the President chose to use neither comparability nor the annual change in private-sector pay as the basis for a pay rate increase. Rather, an arbitrary increase of 4 percent was approved for most federal employees.

Summary Table 1 shows the pay rate adjustments that would have taken place under the comparability or the private-sector pay change criteria as compared with actual increases over the last five years.

SUMMARY TABLE 1. ALTERNATIVE CRITERIA FOR FEDERAL WHITE-COLLAR PAY RATE INCREASES (In percents)

Effective Date	Comparability Increase	Annual Private-Sector Pay Change	Actual Increase
October 1978	8.40	8.40	5.46
October 1979	10.41	7.41	7.02
October 1980	13.46	9.97	9.10
October 1981	15.12	10.69	4.80
October 1982	18.47	7.85	4.00

Funding the Pay Rate Increase

Federal agencies are often required by the Congress to finance increased pay costs out of existing funds. This process, known as absorption, results in reduced expenditures for other administrative items. While absorption does not lower the total cost of a federal civilian pay raise (unless an agency chooses, as it rarely does, to reduce its staffing to achieve absorption savings), it does affect the amount of additional funding received by the agencies to cover the cost. Summary Table 2 details the absorption rates proposed by the President as well as the rates implicit in actual Congressional appropriation levels for the last five years.

SUMMARY TABLE 2. PAY RAISE ABSORPTION RATES--AVERAGE FOR ALL CIVILIAN AGENCIES (In percents)

Fiscal Year	President's Request	Enacted by the Congress
1978	13	11
1979	32	45
1980	11	31
1981	31	37
1982	42	38

Federal Promotions and Employment Levels

The CBO civilian agency pay raise model assumes that there will be no increase in outlays because of grade and step increases (which amount to promotions) for federal workers. Since 1978 the mean federal grade and step have remained relatively constant, reflecting the fact that as some federal workers are being promoted others are leaving the federal service altogether. For this reason, grade and step increases have virtually no net effect on the annual change in the federal payroll. Similarly, CBO assumes a constant level of employment in its civilian agency pay estimates unless an alternative policy is specified.

THE MODEL

Estimating the cost of prospective pay rate adjustments involves three steps: determining the effective rate of increase in white-collar pay given the existence of a statutory pay ceiling; estimating the first-year cost of a pay raise for different categories of workers; and projecting multiyear pay raise costs reflecting absorption.

Estimating the Effective Pay Rate Increase

In recent years, the Congress has frequently chosen to limit the maximum salary payable to federal workers by setting a ceiling on federal pay. The first continuing resolution for 1983, for example, capped General Schedule pay at $57,500 and Senior Executive Service pay at $58,500. When a ceiling is in place, employees near or at the ceiling receive only a portion of the annual increase or no increase at all. Consequently, a pay ceiling has the effect of reducing the average rate of increase in the federal payroll to a level lower than the stated increase approved by the Congress.

The effective pay rate increase is calculated in three steps. First, the current-year payroll is estimated by multiplying the number of workers at each grade and step of the white-collar pay schedules by their present salaries. Second, the new white-collar payroll is calculated using the assumed pay rate adjustment and the applicable pay ceiling. Third, the effective pay rate increase is computed as the annual percentage change in the payroll.

Estimating the First-Year Cost of a Pay Adjustment

To estimate the first-year cost of a prospective pay rate increase, the model breaks the civilian agency work force into four groups: General Schedule and related white-collar schedule employees; military personnel employed by civilian agencies; blue-collar workers; and white-collar employees paid out of trust and revolving funds. The model deals with these groups separately because a pay adjustment generates a different pattern of spending for each group.

For General Schedule employees other than those paid out of trust and revolving funds, the increase in budget authority resulting from a pay rate adjustment is estimated by multiplying the effective pay rate increase by the total payroll for that group. The increase in outlays is then calculated by applying a spendout rate to the change in budget authority. The spendout rate is simply the percentage of the additional budget authority expended in a given year. The outlays resulting from a federal pay raise are less than the increase in budget authority because federal workers do not receive their final paychecks for work performed in any fiscal year until the first pay day of the following year.

First-year increases in budget authority and outlays for military employees of civilian agencies (such as uniformed Coast Guard workers) are projected using a methodology similar to the one used for regular white-collar workers. In this case, however, the effective pay rate increase frequently differs from the adjustment going to other civilian agency employees.

White-collar workers paid out of trust and revolving funds are treated separately by the model because a pay rate adjustment for this group increases outlays but not budget authority. This is because the budget authority for these workers is equal to all receipts of the fund from which they are paid.

Increased pay costs for federal blue-collar workers are singled out because, unlike other federal employees, their pay adjustments do not all take effect on the same day. Rather, the date on which blue-collar workers receive their increase varies by local wage area. This reduces the first-year spendout rate for wage board workers to a level lower than the rate for other categories of federal employees.

Calculating Multiyear Expenditures with Absorption

The third component of the model uses the first-year cost figures estimated for each worker category and an assumed level of absorption to produce a five-year projection of the total additional funding necessary to finance a pay rate increase for civilian agency workers. The unabsorbed portion of the pay raise in the first year is calculated by simply multiplying the full cost of the pay increase by the percentage that is not absorbed. In later years, however, absorption applies only to the latest year of a multi-year projection. This approach is consistent with recent Congressional action generally treating absorption as a temporary rather than a permanent funding reduction.

CURRENT PAY ESTIMATES

The report illustrates the results of the pay raise model with three examples. The first is the CBO baseline used by the budget committees in their fiscal 1983 budget deliberations. The second is CBO's estimate of the costs associated with the pay rate adjustments assumed in the First Concurrent Resolution on the Budget for Fiscal Year 1983. The third is CBO's reestimate of the Administration's 1983 Mid-Session Review.

Summary Table 3 shows the changes the budget committees made in the CBO baseline in order to arrive at budget totals for civilian agency pay raises. The 1983 budget resolution assumed civilian pay raises of 4 percent and an annual absorption rate of 50 percent. This contrasts with the baseline pay raise assumptions of 8 percent, 7.6 percent, and 6.4 percent for the 1983 to 1985 period, with no absorption. The reduced rates of pay increase and the assumed absorption would save roughly $2 billion in 1983, $3 billion in 1984, and $4 billion in 1985.

SUMMARY TABLE 3. COMPARISON OF CBO BASELINE PAY ESTIMATES FOR CIVILIAN AGENCIES WITH THOSE OF THE FIRST CONCURRENT RESOLUTION (By fiscal year, in millions of dollars)

	1983	1984	1985
Baseline Outlays	2,413	5,101	7,560
FCR Pay Raise Savings	-1,180	-2,478	-3,501
FCR Absorption Savings	-604	-654	-679
Total FCR Savings	-1,811	-3,188	-4,258
Total Outlay Increase Assumed in FCR	602	1,913	3,302

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CHAPTER I. INTRODUCTION

The Congressional Budget Office (CBO), as part of its ongoing effort to help users of CBO budget estimates better understand and interpret these estimates, publishes periodic reports on its budget methodology. This report concerns the budgetary treatment of federal civilian agency pay raises--in particular, the effect of the policy environment in which pay raise decisions are made, and the model used by CBO to estimate the cost of those pay raises.

Many factors affect the cost of paying federal civilian employees. Principal among these are the process used to determine the annual rate of increase in federal pay, and the decision regarding what portion of the full cost of the adjustment will be financed by appropriations. In both cases, budgetary considerations have begun to play an increasingly important role.

In developing a budget resolution, the Congress often asks CBO to prepare several pay raise cost estimates using different economic and technical assumptions. The model allows these projections to be computed quickly and accurately so that comparisons can be made between the various alternatives.

Chapter II provides background on some of the major factors affecting pay increase projections. Chapter III explains the CBO approach to estimating the cost of pay raises, the data required by the model, its internal logic, and the final projections produced. Chapter IV details a number of current pay estimates obtained from the model.

CHAPTER II. PAY RAISES IN THE FEDERAL BUDGET

This chapter provides background information on some of the major factors affecting federal civilian pay and, therefore, the CBO pay-raise model. The first section discusses the process that determines the annual rate of increase in federal pay. A brief description of the principle of pay comparability and the methodology used to determine comparability is included. The second section describes the process by which federal agencies are required to absorb a portion of the first-year cost of a salary adjustment by reducing other administrative expenditures. Recent Congressional actions regarding pay absorption are also discussed. The third section examines the way CBO presents federal pay in its budget projections. The final section discusses the net budgetary effects of a pay raise for federal civilian workers.

THE PAY RATE ADJUSTMENT MECHANISM

The laws governing the pay of federal civilian employees are intended to ensure salary comparability with workers serving similar functions in the private sector. The principle of comparability, established for white-collar workers by the Federal Pay Comparability Act of 1970 and for blue-collar workers by Public Law 92-392, is designed to attract and retain highly qualified people in government, while at the same time avoiding competition with the private sector that might lead to increased labor costs.1/ Once achieved, pay comparability is to be preserved through appropriate annual salary adjustments.

Different mechanisms are used to determine comparability adjustments for white- and blue-collar workers. The increase in pay rates necessary to achieve and maintain pay comparability for white-collar workers is based on the findings of the annual Professional, Administrative, Technical, and Clerical (PATC) Survey of private-sector pay in approximately 100 job descriptions. Under the comparability legislation, salaries may be adjusted differently for each federal grade, although a single rate of increase has been applied to all grades in most

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1. Congressional Research Service, Proposed Federal Pay Reform (Library of Congress, 1980), p. CRS-3.

years.2/ Comparability adjustments for blue-collar workers, on the other hand, are based on local wage surveys in each of 135 local wage areas. These surveys are conducted at various times throughout the year and cover workers in all regular blue-collar pay plans.3/

While there is a general consensus that comparability should govern the federal pay-setting process, there is disagreement as to how comparability should be defined. For example, some critics charge that the current system is flawed because it fails to reflect differences in fringe benefits and job security as factors in setting federal pay levels. These critics also argue that the exclusion of state and local government employees from the annual wage and salary surveys has resulted in an upward bias in the federal pay rates.4/

During its first year in office, the Reagan Administration proposed a comprehensive pay reform plan designed to deal with these concerns. The Administration withdrew this proposal in 1982, however, in order to consider certain Congressional objections and other proposals. According to the President's 1983 budget message, a new proposal should be ready in time for the 1984 budget.5/

Although comparability is the guiding principle in setting federal pay under current law, the President and the Congress have great discretion in determining what the annual adjustment should be. In the event of a national emergency or adverse economic conditions, the President may offer an alternative pay plan based on factors other than comparability, as he has done in each of the last five years.6/ The alternative plan goes into effect

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2. Office of Personnel Management, Annual Report of the President's Pay Agent, 1981 (August 21, 1981), pp. 1-6.

3. Congressional Budget Office, Alternative Approaches to Adjusting Compensation for Federal Blue-Collar Employees (November 1980), pp. 5-17.

4. Congressional Budget Office, Compensation Reform for White-Collar Employees: The Administration's Proposal and Budgetary Options for 1981 (May 1980), pp. 8-15.

5. Budget of the United States Government, Fiscal Year 1983, "Special Analysis I: Civilian Employment in the Executive Branch," p. 9.

6. Federal Pay Comparability Act of 1970, 5 USC 5301(c) (1).

unless either House registers a vote of disapproval. If the Congress rejects the alternative plan without making some provision for limiting federal pay adjustments, the comparability increase automatically takes effect.7/

A list of actual white-collar pay rate increases for the last 11 years appears in Table 1. These adjustments were effective as of the first pay period in October, as provided in the comparability legislation. The October 1978 through October 1982 adjustments took place under the alternative plan provision of the 1970 act, and were applied to both white- and blue-collar employees.

DETERMINING THE PERCENTAGE INCREASE IN PAY RATES

The specific pay rate increase assumed for future years is dependent on the nature of the budget projection or cost estimate required. For some purposes, CBO is asked to assume a pay rate increase based on factors other than comparability--for example, the adjustment requested by the President or assumed in a Congressional budget resolution. On other occasions, the assumed pay rate increase reflects the salary adjustment projected as necessary to maintain comparability.8/ In such cases, the required pay increase is projected by an equation relating the annual percentage change in the PATC survey to the annual change in average hourly earnings, and adding the catch-up percentage needed to compensate for past pay caps.

The following regression equation is used for this purpose (standard errors in parentheses):

$$\Delta\%\ \text{PATC} = \underset{(1.00)}{-1.47} + \underset{(0.136)}{1.173}\,(\Delta\%\ \text{AHE}) \qquad R^2=0.84 \quad DW=1.93 \tag{1}$$

Sample period: 1967-1981 (annual data)

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7. The 1982 Reconciliation Act serves as a good example of the flexibility the Congress has in setting federal pay rates. This act substituted a 4 percent pay raise for the comparability raise in the event that the President's alternative plan for fiscal year 1983 was rejected.

8. Although the methodology described in this report assumes a single pay rate increase for all workers covered by a given salary schedule, the CBO model is capable of handling pay adjustments that vary by grade.

TABLE 1. HISTORICAL FEDERAL WHITE-COLLAR PAY RATE INCREASES (In percents)

Effective Date	Actual	Increases Based on Comparability	
		With Catch-up a/	Without Catch-up
October 1972	5.14	5.14	5.14
October 1973	4.77	4.77	4.77
October 1974	5.48	5.48	5.48
October 1975	5.00	8.66 b/	8.66
October 1976	5.17	5.17 c/	1.62 b/
October 1977	7.03	7.03	7.03
October 1978	5.46	8.40	8.40
October 1979	7.02	10.41 c/	7.41
October 1980	9.10	13.46 c/	9.97
October 1981	4.80	15.12 c/	10.69
October 1982	4.00	18.47 c/	7.85

a. Catch-up increases are those required to compensate for past pay caps.

b. The irregular pattern between 1974 and 1976 results from administrative changes in the PATC survey.

c. Includes catch-up increase.

SOURCE: Office of Personnel Management, White-Collar Pay Systems Division

where:

Δ% PATC = Annual percentage change in the Professional, Administrative, Technical, and Clerical Survey

Δ% AHE = Annual percentage change (first quarter over first quarter) in average hourly earnings of private nonfarm employees

The existence of a pay ceiling also affects the average pay rate increase received by federal employees. In recent years, the Congress has frequently chosen not to provide top-level federal executives with the annual salary increases approved for other employees. As a result, the effective rate of increase for the federal work force as a whole turns out to be lower than the stated rate of increase approved by the Congress during the years a pay ceiling is in place.

The 1983 continuing appropriation (H.J. Res. 599), for example, retains the pay ceilings of $57,500 for General Schedule employees and $58,500 for members of the Senior Executive Service. This reduces the effective federal white-collar salary adjustment for fiscal year 1983 from a stated rate of 4.0 percent to an average effective rate of 3.9 percent.

To illustrate the methodology used in estimating comparability pay increases, suppose that the PATC survey showed an 18.5 percent raise as necessary to achieve comparability in October 1982. Given that a 3.9 percent effective increase was actually approved for that year, a 14.1 percent catch-up raise would be required (1.185/1.039 = 1.141).

Assuming that the projected increase in the PATC survey from the first quarter of calendar year 1982 to the first quarter of calendar year 1983 is 8.5 percent, the required comparability increase scheduled to take effect on October 1, 1983, would be 23.8 percent (1.141 x 1.085 = 1.238). The pay rate increases estimated for subsequent years would simply equal the projected annual increase in the PATC survey.

ABSORPTION

Absorption refers to the process by which federal agencies are required to finance a portion of the first-year cost of a pay raise out of existing budget authority. Essentially, the process works in the following manner.

Each year the Office of Management and Budget sends a directive to the heads of all federal executive departments stipulating the level of absorption they must achieve and providing guidance on how increased pay costs may be absorbed. The fiscal year 1982 directive, for example, stated that agencies would be required to absorb a minimum of 50 percent of the increased costs associated with the October 1981 pay adjustment.9/

Agencies are generally required to meet their absorption targets in one of three ways. First, all savings within a given budget account resulting from such factors as lower than anticipated personnel levels and reduced

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9. Office of Management and Budget, Increased Pay Absorption, Bulletin No. 82-4, November 2, 1981, p. 3.

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